

## **MIXER CIRCUIT WITH BYPASS AND MIXING MODES HAVING CONSTANT EVEN ORDER GENERATION AND METHOD OF OPERATION**

### **Abstract**

A mixer circuit configured to operate in a bypass or mixing mode, and which comprises a mixer core, and a mode select circuit. The mixer core includes first and second switches, each of which has an input, and first and second outputs. The mode select circuit is coupled to the mixer core and includes third and fourth switches, which are collectively configured to operate in either a first state corresponding to the bypass mode, or a second state corresponding to the mixing mode. The input of the first switch is configured to receive a signal at a first frequency, wherein the first and second switches are configured to switch between their respective first and second outputs at a second frequency, and wherein, responsive to the state of the third and fourth switches, the first output of the first switch, and the second output of the second switch are each configured to output a signal which is either (i) at the first frequency, or (ii) a mixing product of the first and second frequencies.